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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,997	08/07/2001	Hiroynki Takahashi	SIM-01501	1911

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PATENT GROUP
CHOATE, HALL & STEWART
EXCHANGE PLACE, 53 STATE STREET
BOSTON, MA 02109

EXAMINER

COX, CASSANDRA F

ART UNIT	PAPER NUMBER
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2816

DATE MAILED: 09/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/923,997

Applicant(s)

TAKAHASHI, HIROYUKI

Examiner

Cassandra Cox

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06/12/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15 and 19-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15 and 22-24 is/are allowed.
- 6) ☒ Claim(s) 19,21 and 25-28 is/are rejected.
- 7) ☒ Claim(s) 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 09 May 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's arguments with respect to claims 1-5, 9-11, and 15-18 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 25 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 25, line 8 adds the limitation of "a NOR gate receiving the logic signal and the output signal", which is seen to be new matter because there is no support for the use of a NOR gate in the specification or the drawings as originally filed.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 19, 21, 27, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe et al. (U.S. Patent No. 5,055,713).

In reference to claim 19, Watanabe discloses in Figure 5 a delay circuit comprising: first and second nodes; a first inverter (I2), the output of which is coupled to

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the first node, the first inverter (I2) receiving a logic signal; a second inverter (I3), the input of which is coupled to the first node and the output of which is coupled to the second node; a first capacitor (C1) coupled between the first node and a first power source line (VSS), the first capacitor (C1) being of a first channel type (n-MOS); and a second capacitor (C2) coupled between the second node and a second power source line (VCC), the second capacitor (C2) being of a second channel type (p-MOS) which is different from the first channel type. The same applies to claim 21, wherein the first power source line (VSS) is fixed at a ground potential.

In reference to claim 27, Watanabe discloses in Figure 5 a delay circuit for delaying a logic signal having a first logical level and a second logical level, comprising: an inverter chain (I2, I3) including a plurality of inverters and at least one first capacitor (C1), the inverter chain receiving the logic signal, the first capacitor including a MOS transistor of a first channel type (n-MOS), the first capacitor being operated so that the capacitor (C1) changes from an off-state to an on-state to increase its capacitance when the logic signal changes from a first logical level to a second logical level, whereby the inverter chain outputs a first delay signal generated after a first delay time from the transition timing from the first to the second logical levels of the logic signal, the first capacitor (C1) being operated so that the capacitor (C1) changes from an on-state to an off-state to decrease its capacitance when the logic signal changes from a second logical level to a first logical level, whereby the inverter chain outputs a second delay signal generated after a second delay time from the transition timing from the second to the first logical levels of the logic signal, the second delay time being shorter than the first

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delay time, a logical gate (NA1) receiving the output of the inverter chain and the logic signal so that the logical gate outputs its output signal in response to the first delay signal when the logic signal changes from the first logical level to the second logical level.

In reference to claim 28, Watanabe further discloses in Figure 5 a second capacitor (C2), the second capacitor (C2) being comprised of a MOS transistor of a second channel type (p-MOS) which is different from the first channel type (n-MOS), the second capacitor being coupled to a node which is different from the node coupled to the first capacitor (C1) in the inverter chain, the second capacitor (C2) being operated so that the capacitor (C2) changes from an off-state to an on-state to increase its capacitance when the logic signal changes from a first logical level to a second logical level, whereby the inverter chain outputs a first delay signal generated after a first delay time from the transition timing from the first to the second logical levels of the logic signal, the second capacitor (C2) being operated so that the capacitor (C2) changes from an on-state to an off-state to decrease its capacitance when the logic signal changes from a second logical level to a first logical level, whereby the inverter chain outputs a second delay signal generated after a second delay time from the transition timing from the second to the first logical levels of the logic signal, the second delay time being shorter than the first delay time.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. (U.S. Patent No. 5,055,713) in view of Kasa (U.S. Patent No. 4,803,665).

In reference to claim 26, Watanabe discloses all the limitations of the claim as mentioned above with respect to claim 19, except Watanabe does not disclose the AND gate receiving the logical signal and a signal on the second node. Kasa discloses a circuit including an AND gate (12) receiving the logical signal and a signal (which is the output of the delay circuit 11) on a second node. Since Kasa does not disclose a particular delay circuit, any delay circuit could be used. It would have been obvious to one skilled in the art at the time of the invention that the delay circuit of Watanabe could be used as the delay circuit of Kasa as one way of implementing the delay circuit.

Allowable Subject Matter

7. Claims 15 and 22-24 are allowed.

8. The following is an examiner's statement of reasons for allowance: Claim 15 is allowed because the closest prior art of record fails to disclose a circuit as disclosed in the specification page 31, line 15 through page 32, line 1 wherein the low threshold

voltage n-MOS transistors of each of a first and a third inverter are connected to ground by a high threshold voltage n-MOS transistor; and low threshold voltage p-MOS transistors of each of a second and a fourth inverter are connected to ground by a high threshold p-MOS transistor; and said high threshold voltage n-MOS transistor and p-MOS transistor are set to an off state in response to a chip select signal and a chip select signal that is negated (respectively) in combination with the rest of the limitations of the base claims and any intervening claims. Claims 22-24 are allowed because the closest prior art of record fails to disclose a circuit as shown in Figure 2A wherein no capacitor is connected to the second node in combination with the rest of the limitations of the base claims and any intervening claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cassandra Cox whose telephone number is 703-306-5735. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 5:30 PM and on alternate Fridays from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on (703)-308-4876. The fax phone

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numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

CC



August 25, 2003



TIMOTHY P. CALLAHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800